

# INTRODUCTION TO TODAY'S ULTRAHIGH-STRENGTH STRUCTURAL STEELS

*Issued Under the Auspices of*  
AMERICAN SOCIETY FOR TESTING AND MATERIALS  
*and*  
THE DEFENSE METALS INFORMATION CENTER

*Prepared by*  
A. M. Hall



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A. M. Hall\*

## ABSTRACT

The features that distinguish the "ultrahigh-strength" steels from the other classes of high-strength constructional steel are described. The various families of ultrahigh-strength steel are discussed in terms of composition, mechanical properties, forms available, forming characteristics, and weldability. Recent developments in the technology are described, and illustrative applications are given. The families of ultrahigh-strength steel discussed include medium-carbon low-alloy hardenable, medium- and high-alloy hardenable, high-nickel maraging, hardenable stainless, and cold-rolled stainless.

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\*Assistant Manager, Process and Physical Metallurgy,  
Battelle's Columbus Laboratories, Columbus, Ohio.



